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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/728,283	12/04/2003	Mark Kingston Jennings	65857-0118	7159

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BLOOMFIELD HILLS, MI 48304-0610

EXAMINER
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LORENCE, RICHARD M

ART UNIT	PAPER NUMBER
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3681

DATE MAILED: 02/23/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/728,283

Applicant(s)

JENNINGS, MARK KINGSTON

Examiner

Richard M. Lorence

Art Unit

3681

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 04 December 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 04 December 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This is the first Office action on the merits of Application No. 10/728,283 filed on December 4, 2003. Claims 1-20 are currently pending.

#### ***Specification***

The disclosure is objected to because of the following informalities: The brief description of Figure 7 in paragraph [0012] is incorrect. Figure 7 does not show a prior art clutch release system as stated in paragraph [0012], but rather it is a view similar to Figure 6 showing another embodiment of the inventive roller assembly as described at paragraphs [0024]-[0025]. Appropriate correction is required.

#### ***Claim Objections***

Claims 1, 5, 9 and 17 are objected to because of the following informalities:

In line 17 of claim 1 "a first end" should read - - the first end - -, since the first end of the release sleeve was previously recited in line 13 of the claim.

In line 20 of claim 1 "pressure plate" apparently should read - - sleeve - -, since the spring 40 is disposed between the sleeve 31 and the cover 18 as shown in Figure 4 and described in paragraph [0018].

In line 22 of claim 1 "a second end" should read - - the second end - -, since the second end of the release sleeve was previously recited in line 14 of the claim.

In line 2 of claim 5 "bearing" should read - - bearings - -.

In line 8 of claim 9 after "disposed", - - on - - should be inserted.

In line 5 of claim 17 "a bearing support shaft" should read - - the bearing support shaft - -, since the bearing support shaft was previously recited in line 4 of the claim.

Appropriate correction is required.

***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 15 and 17-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 15 recites the limitation "said roller bearing" in line 2. There is insufficient antecedent basis for this limitation in the claim. Apparently the claim should depend from claim 13 rather than claim 10.

The preamble of claim 17 is incorrect. The roller assembly 54 is not secured in the fork shaft 46, but rather in the bearing support shaft 60.

Claim 19 is unclear regarding the aligned grooves. As best understood the claim is directed to the embodiment of Figure 6 wherein the snap ring 80 is disposed in a groove 84 in the bearing element which is aligned with a groove 82 formed in the support shaft in the bearing element. There are not a plurality of grooves in the bearing as currently recited.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 10, 12, 13, 15, 17, 18 and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by McAdams et al. '100 which discloses a clutch release yoke 31 which, as best seen in Figure 2, includes a plurality of fork sections 33 extending from a bridge section mounted on the shaft 32. Bearing elements 34 are mounted on respective support shafts attached to the forks. As can be clearly seen in the figure the bearing support shafts are formed by threaded bolts, the heads of which form retention flanges for retaining the bearings elements in position. The retention flanges are located opposite to the inboard side of the forks. The bearings roll in the groove 35 and as such are roller bearings.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13-15 and 18 are further rejected under 35 U.S.C. 103(a) as being unpatentable over McAdams et al. '100 in view of Spase '621.

Spase discloses a clutch release yoke 32 similar to that shown in McAdams including anti-friction rollers 35 mounted on the forks 34. As can clearly be seen in each of Figures 1 and 5 the bearing elements of Spase include small diameter rolling elements and are accordingly needle bearings.

While McAdams apparently shows a bearing element in the form of an annular sleeve mounted to the forks, it is believed that one having ordinary skill in the art at the time the invention was made would recognize that by mounting the bearing elements on the forks via a roller or needle bearing the amount of friction generated between the bearing element and the support shaft would be reduced leading to the desirable result of decreased wear.

Claims 1-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lepard et al. '181 in view of McAdams et al. '100.

The '181 patent to Lepard discloses a clutch assembly in Figure 3 including a flywheel 20, transmission input shaft 24, cover 18, pressure plate 28, driven disc 26, release sleeve 32, levers 30, spring 40 and release bearing 15 as set forth in claim 1. The clutch assembly of Lepard further includes the clutch housing 10 (see Figure 8) in which the release shaft 46 is pivotally disposed, the yoke 12 having fork arms 52 extending from bridge section 50, and the bearing elements 70 rotatably mounted on

support shafts 74 attached to inboard ends of the fork arms. Regarding claims 2, 11 and 19, note Figure 7 of Lepard et al. which shows the snap ring 86 disposed in the grooves 83, 84. Lepard does not show the claimed retention flange.

As discussed hereinabove, McAdams et al. '100 discloses a clutch release yoke 31 which includes a plurality of fork sections 33 extending from a bridge section mounted on the shaft 32. Bearing elements 34 (equivalent to Lepard's bearing elements 70) are mounted on respective support shafts attached to the forks. The bearing support shafts are formed by threaded bolts, the heads of which form retention flanges for retaining the bearings elements in position. The retention flanges are located opposite to the inboard side of the forks.

Since Lepard et al. and McAdams et al. are both from the same field of endeavor, one having ordinary skill in the art would recognize that the rollers 70 of Lepard could be mounted to the fork arms of the yoke in the manner shown by McAdams et al. It would have been obvious to one having ordinary skill in the art at the time the invention was made to mount the rollers 70 of Lepard to the fork arms of the yoke in the manner shown by McAdams et al. in order to obviate the need for the specialized tool 92 required in the assembly of Lepard's device, since the threaded nut and bolt employed by McAdams et al. require only tools such as wrenches and screwdrivers which are commonly found in the toolbox of most any mechanic.


***Prior Art Citation***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The examiner further cites Reed '557, Cole et al. '765, Grillo '012 and Iizuka et al. '631 (JP) each of which show clutch forks; and Wing '335, Russell '356 and Storch et al. '512 which show bearings held on a shaft by a retention flange.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Richard M. Lorence whose telephone number is (703) 308-3062. The examiner can normally be reached on Mondays through Fridays from 9:00AM to 5:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Charles A. Marmor can be reached on (703) 308-0830. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Richard M. Lorence  
Primary Examiner  
Art Unit 3681

Lorence/rml